ABSTRACT

A method of forming two regions having differing depths using a single implantation process is provided. A mask having two openings associated therewith is formed over a semiconductor body, wherein one of the openings has a size larger than an implantation design rule, and the other opening has a size smaller than the design rule. An implant is performed into the semiconductor body through the implant mask, resulting in two distinct doped regions, wherein the region associated with the larger opening has more dopant than the region associated with the smaller opening. Subsequent activation and thermal processing results in the one region diffusing a greater amount than the second region, thereby resulting in two regions formed concurrently having different depths.

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